

### PROJECT REPORT

**ON** 

# "Meals on Wheels"

**Under the Guidance of Prof. Milind Deshkar** 

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# SUBMITTED TO SAVITRIBAI PHULE PUNE UNIVERSITY



Institute of Business Management and Research MCA, Pune MCA Semester-1 2022-23

# INDEX

	TOPIC	PAGE NO.
СНАРТ	4	
СНАРТ	ER 2: EXISTING SYSTEM	5
СНАРТ	ER 3: SCOPE OF SYSTEM	6
СНАРТ	ER 4: OPERATIONAL ENVIRONMENT	7
4.1	Hardware Platform	7
4.2	Software Platform	7
4.3	Detail Description of Technology Used	8
СНАРТ	ER 5: PROPOSED SYSTEM	12
CHAPT	ER 6: OBJECTIVE	13
СНАРТ	14	
CHAPT	15	
СНАРТ	ER 9: FEASIBILITY STUDY	16
9.1	Operational Feasibility	16
9.2	Technical Feasibility	16
9.3	Economic Feasibility	16
CHAPTER 10: SYSTEM DESIGN		17
10.1	ER Diagram	17
10.2	Sequence Diagram	18-19
	> Admin	
	> Customer	
10.3	Use Case Diagram	21

	TOPIC	PAGE NO.
10.4	DFD Diagram	22-23
	Zero Level DFD	
	➤ First Level DFD	
	> 2A Level DFD	
	> 2B Level DFD	
CHAPTI	ER 11: TABLE DESIGN	24-27
CHAPTE	ER 12: SYSTEM DESIGN	26
CHAPTE	ER 13: SCREEN SHOT	27-29
> S	ign Up Page	
> M	laster Page	
> Lo	ogin Page	
> A	dd Category Page	
> A	dd Food Item	
> A	dd Subcategory	
> C	ategory List	
> O	order List	
> F	ood List Screen	
> O	order Booking	
> U	ser Order	
> M	lenu Gallery	
> C	hef Gallery	
> C	ontact Us Page	44
CHAPTE	ER 14: VALIDATION AND CHECK	41
СНАРТ	ER 15: IMPLEMENTATION AND MAINTAINENCE	42
СНАРТІ	ER 16: FUTURE ENHANCEMENT	43
CHAPTI	ER 17: BIBILOGRAPHY	44

### **CHAPTER 1: INTRODUCTION**

It is known globally that, in today's market, it is extremely difficult to start a new small-scale business and live-through the competition from the well-established and settled owners. In fast paced time of today, when everyone is squeezed for time, the majority of people are finicky when it comes to placing a food order.

The customers of today are not only attracted because placing an order online is very convenient but also because they have visibility into the items offered, price and extremely simplified navigation for the order. Online ordering system that I am proposing here, greatly simplifies the ordering process for both the customer and the restaurant.

System presents an interactive and up to date menu with all available options in an easy-to-use manner. Customer can choose one or more items to place an order which will land in the Cart. Customer can view all the order details in the cart before checking out. At the end, customer gets order confirmation details. Once the order is placed it is entered in the database and retrieved in pretty much real time. This allows Restaurant Employees to quickly go through the orders as they are received and process all orders efficiently and effectively with minimal delays and confusion.

### **CHAPTER 2: EXISTING SYSTEM**

This Case study looks at the problem of setting up a fast-food restaurant. In existing system there are few problems:

- For placing any orders customers have to visit hotels or restaurants to know about food items and then place order and pay. In this method time and manual work is required.
- ➤ While placing an order over the phone, customer lacks the physical copy of the menu item, lack of visual confirmation that the order was placed correctly.
- Every restaurant needs certain employees to take the order over phone or in-person, to offer a rich dining experience and process the payment. In today's market, labor rates are increasing day by day making it difficult to find employees when needed.

Hence, to solve this issue, what I propose is an "Meals on Wheels", originally designed for small-scale business-like College Cafeterias, Fast Food restaurant or Take-Out, but this system is just as applicable in any food delivery industry. The main advantage of my system is that it greatly simplifies the ordering process for both the customer and the restaurant and also greatly lightens the load on the restaurant's end, as the entire process of taking orders is automated.

### **CHAPTER 3: SCOPE OF SYSTEM**

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current all works relative to Meals on Wheels. It will be also reduced the cost of collecting the management & collection procedure will go on smoothly.

Our project aims at Business process automation, that is we have tried to computerize various processes of Online Food Ordering System.

- ➤ In computer system the person has to fill the various forms & number of copies of the forms can be easily generated at a time.
- ➤ In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time.
- To assist the staff in capturing the effort spent on their respective working areas.
- > To utilize resources in an efficient manner by increasing their productivity through automation.
- > The system generates types of information that can be used for various purposes.
- ➤ It Satisfy the user requirement
- > Be easy to understand by the user and operator
- > Be easy to operate
- ➤ Have a good user interface
- ➤ Be expandable
- ➤ Delivered on schedule within the budget

# **CHAPTER 4: OPERATIONAL ENVIRONMENT**

### 4.1 Hardware Platform:

- > Computer and other devices
- > Printer
- ➤ Processor: Intel(R) core i-3 7020U CPU @2.30 GHz
- ➤ Hard Disk: 1 TB

### **4.2 Software Platform:**

- ➤ Eclipse/NetBeans (IDE)
- ➤ JDK 1.8
- > Front End: JFrame
- ➤ Back End: SQL
- ➤ Operating System: Windows 7/Windows 8/Windows 10/Window X

### 4.3 Detail Description of Technology Used:

### JAVA:

Java is an object-oriented programming language developed by James Gosling and Colleagues at Sun Microsystem in early 1990s. Unlike conventional languages which are generally designed either to be compiled to native code, or to be interrupted from source code at runtime, Java is intended to be compiled to a byte code, which is then run (generally using JIT compilation) by a Java Virtual Machine.

Java was started as a project called "oak" by James Gosling in June 1991. Gosling goals were to implemented a virtual machine and a language that had a familiar C-like notation but with greater uniformly and simplicity then C and C++. The first public implementation was Java 1.0 in 1995.

It made the promise of "Write Once, Run Anywhere", with free runtimes on popular platforms. It was fairly secure and its security was configurable, allowing for network and access to be limited. The major web browsers soon incorporated it into their standard configuration in secure "Applet" configuration popular quickly. New versions for large and small platforms (J2EE and J2ME) soon were designed with the advent of "Java 2". Sun has not announced any plans for a "Java 3".

### > NetBeans:

The Net Beans Platform is a framework for simplifying the development of Java Swing desktop applications. The Net Beans IDE bundle for Java SE contains what is needed to start developing Net Beans plugins and Net Beans Platform based applications no additional JDK is required.

Applications can install modules dynamically. Any application can include the Update Centre module to allow users of the application to download digitally signed upgrades and new features directly into the running application. Reinstalling an upgrade or a new release does not force users to download the entire application again.

The platform offers reusable services common to desktop applications, allowing developers to focus on the logic specific to their application. Among the features of the platformers.

Net Beans IDE is an open-source integrated development environment. Net Beans IDE supports development of all Java application types (Java SE (including Java FX), Java ME, web EJB and mobile applications) out of the box. Among other features are an Ant-based project system, Maven support, refactoring, version control (supporting CVS, Subversion, Mercurial and Clear case).

**Modularity:** All the functions of the IDE are provided by modules. Each module provides well-defined function, such as support for the Java language, editing, or support for the CVS versioning system, and SVN. Net Beans contains all the modules needed for Java development in a single download, allowing the user to start working immediately. Modules also allow Net Beans to be 32 extended. New features, such as support for other programming languages, can be added by installing additional modules. For instance, Sun Studio, Sun Java Studio Enterprise, and Sun Java Studio Creator from Sun

Microsystems are all based on the Net Beans IDE.

**License:** From July 2006 through 2007, Net Beans IDE was licensed under Sun's Common Development and Distribution License (CDDL), a license based on the Mozilla Public License (MPL). In October 2007, Sun announced that Net Beans would henceforth be offered under a dual license of the CDDL and the GPL version 2 licenses, with the GPL linking exception for GNU Class path

- User Interface Management (e.g Menus and Toolbars)
- User Settings Management
- Storage Management (Saving and Loading any Kind of Data)
- Window Management
- Wizard Framework (Supports Step-by-Step Dialogs)
- Net Beans Visual Library
- Integrated Development Tools

### > MySQL Database:

MySQL Server is a Microsoft product used to manage and store information. Technically, MySQL Server is a "relational database management system.

MySQL is a leading Open-Source database management system. It is a multi-user, multithreaded database management system. MySQL is especially popular on the web. It is one of the parts of the very popular LAMP platform. Linux Apache, MySQL and PHP.

MySQL database is available on most important OS platforms. It run on BSD Unix, Linux, Windows or Mac Wikipedia You tube Facebook use MySQL. These sites manage millions of queries each day. MySQL server software and the client libraries are dual-licensed GPL version 2 and proprietary license.

The development of MySQL begun in 1994 by a Swedish company MySQL AB in 2008 Sun was bought by oracle in 2010.MySQLPostgreSQL, Firebird, SQLite, Derby and HSQLDB are the most well-known open-source database systems.

### **RDBMS Technology:**

Before we proceed to explain MySQL database system, let's revise few definitions related to database.

- **Database:** A database is a collection of tables, with related data.
- **Table:** A table is a matrix with data. A table in a database looks like a simple spreadsheet.
- **Column:** One column (data element) contains data of one and the same kind, for example the column postcode.
- **Row:** A row (= tuple, entry or record) is a group of related data, for example the data of one subscription.
- **Redundancy:** Storing data twice, redundantly to make the system faster.
- **Primary Key:** A primary key is unique. A key value cannot occur twice in one table. With a key, you can find at most one row.
- **Foreign Key:** A foreign key is the linking pin between two tables.
- Compound Key: A compound key (composite key) is a key that consists of multiple columns, because one column is not sufficiently unique.
- **Index:** An index in a database resembles an index at the back of a book.
- **Referential Integrity:** Referential Integrity makes sure that a foreign key value always points to an existing row.

### **CHAPTER 5: PROPOSED SYSTEM**

### **Proposed System:**

This system is a bunch of benefits from various point of views. As this online application enables the end users to register to the system online, select the food items of their choice from the menu list, and order food online.

also, the payment can be made through online mode or at the time of home delivery depending upon the customer's choice and convenience. The selection made by the customers will be available to the hotel reception or to the person handling work assignment.

Now this same person will assign the orders to the specialist chef to be completed within a fixed duration of time.

As soon as the chef prepares the food, the later person forwards the parcels to the delivery persons assigned with the location and customer identity of the customer along with the bill status. With this application the work load of the waiter in the hotels are reduced or in some situations the work is abolished.

One of the various benefits of this is system is that if there is rush or a huge crowd present in the restaurant then in that case sometimes unavailability of tables cut downs the restaurants customer. also, there will be chances that the waiters are unavailable as they are busy in handling others, so the customer can directly order the food to the chef online by using this application, by checking the seat availability in the restaurant.

This system Allow the staff to serve customer within less time as compared to the manual system

### **CHAPTER 6: OBJECTIVE**

The main objective of the project is to learn and implement a real time application on database for Online-Food Ordering System.

The project, concentrates on taking orders, streamlining the orders to a specified restaurant and billing. This Database will be a great solution for many Startups food business, they can just start initially with less funds by posting their menu online with this application.

The aim of developing Online Food Ordering system project is to replace the traditional way of taking orders with computerized system. Another important reason for developing this project is to prepare order summary reports quickly and in correct format at any point of time when required. Online Food Ordering System has a very lot of scope.

This PHP project can be used by any restaurants or fast foods for customers for keeping their order records. This project is easy, fast and accurate. It requires less disk space. Online Food Ordering System uses MYSQL Server as backend so there is not any chance of data loss.

# **CHAPTER 7: USER REQUIREMENT**

The System will be designed to be user friendly. The user friendly and interactive interfaces design helps to achieve this by enabling customers to easily browse through the menus place orders with just a few clicks and also allows restaurant employees to quickly go through the orders as they are placed and produce the necessary items with minimal delay and confusion. The system will be simple to use.

### **Functional requirements:**

Functional requirements define the capabilities and functions that a system must be able to perform successfully. The functional requirements of this Meals on Wheels include:

- > The system shall enable the customer to view the products menu, create an account, login to the system and place an order.
- ➤ The customer shall specify whether the order is to be picked up or delivered.
- ➤ The system shall display the food items ordered, the individual food item prices and the payment amount calculated.
- ➤ The system shall prompt customer to confirm the meal order.
- ➤ The system shall enable the admin to view, create, edit and delete food category and descriptions.
- > The system shall allow the admin to update additional information (description, photo, ingredients etc.) for a given food item.
- The system shall allow the admin to update price for a given food item.

### **Non-Functional Requirement:**

A non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. Some of the non-functional requirements include:

- ➤ They should be sufficient network bandwidth
- ➤ Backup- provision for data backup
- ➤ Maintainability- easy to maintain
- ➤ Performance/ response time- fast response
- Expandability- needs to be future proof or upgradable
- > Safety- should be safe to use

### **CHAPTER 8: IDENTIFICATION OF NEED**

The old manual system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order, there used to be lots of difficulties in associating any particular transaction with a particular context.

If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation. There would always be unnecessary consumption of time while entering records and retrieving records. One more problem was that it was very difficult to find errors while entering the records. Once the records were entered it was very difficult to update these records.

The reason behind it is that there is lot of information to be maintained and have to be kept in mind while running the business. For this reason, we have provided features Present system is partially automated (computerized), actually existing system is quite laborious as one has to enter same information at three different places

### **CHAPTER 9: FEASIBILITY STUDY**

As a part of preliminary Investigation, the feasibility study was carried out. The proposed system was viewed from three aspects.

### 9.1 Operational Feasibility:

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, a proper training has been conducted to let know the essence of the system to the users so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing.

### 9.2 Technical Feasibility:

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system and checked if everything was possible using different type of frontend and backend platforms.

### 9.3 Economic Feasibility:

This is a very important aspect to be considered while developing a project. We decided the technology based on minimum possible cost factor.

- All hardware and software cost has to be borne by the organization.
- Overall, we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

# **CHAPTER 10: SYSTEM DESIGN**

# 10.1 Entity Relationship Diagram (ERD):

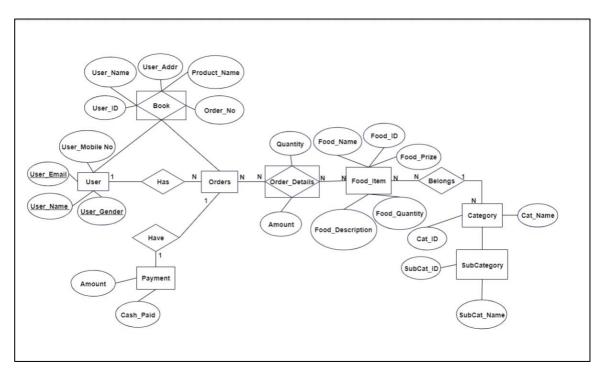


Figure – ER Diagram

# 10.2 Sequence Diagram:

# \* Admin Sequence Diagram:

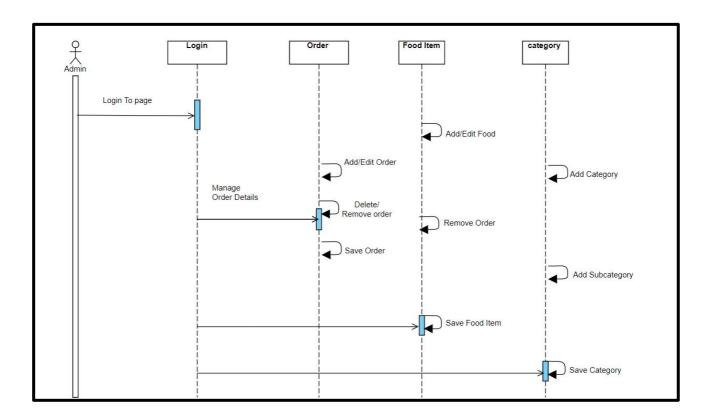


Figure - Admin Sequence Diagram

# **\*** Customer Sequence Diagram:

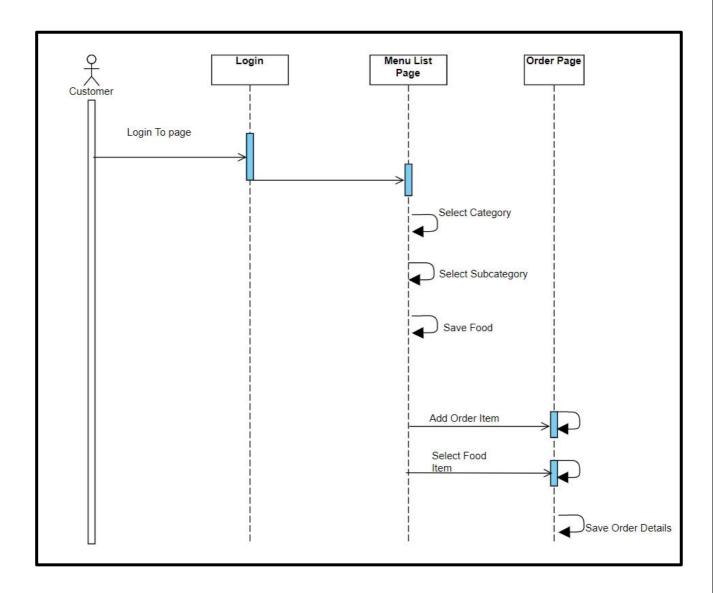


Figure - Customer Sequence Diagram

# 10.3 Use Case Diagram:

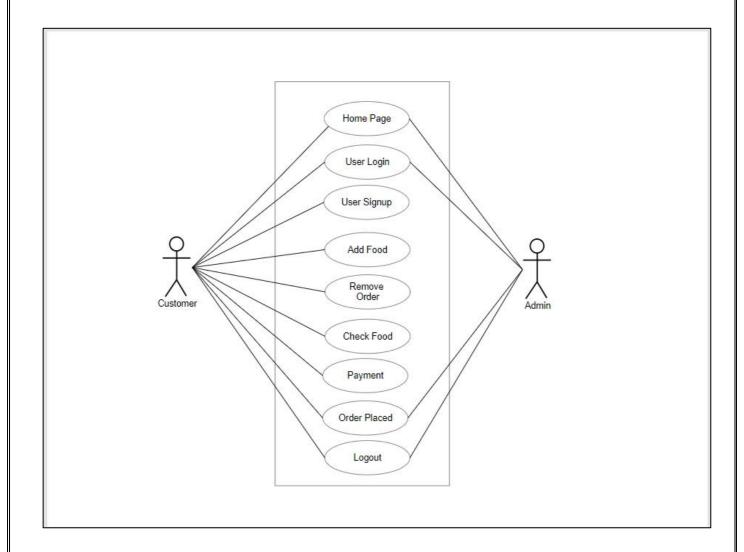


Figure - Use Case Diagram

### 10.4 Data Flow Diagram:

### **\*** Zero Level DFD:

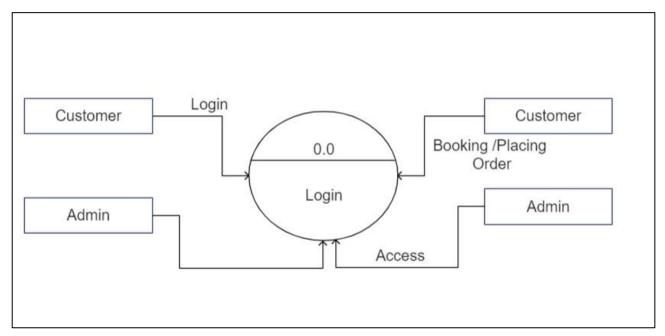


Figure - Zero Level DFD

### **\*** First Level DFD:

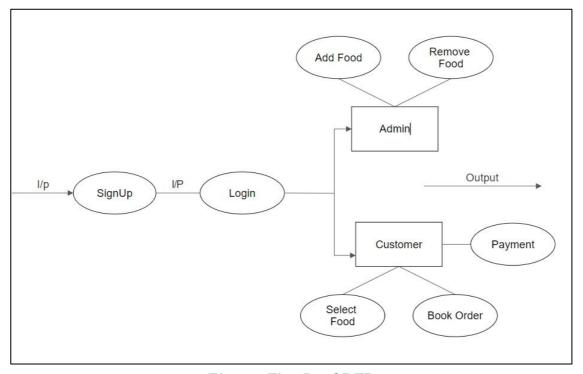


Figure - First Level DFD

### **\*** Level- 2A DFD:

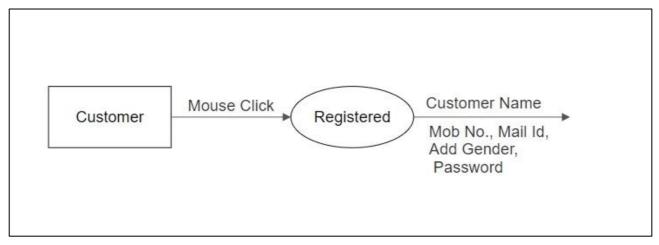


Figure - Level 2A DFD

### **❖** Level-2B DFD:

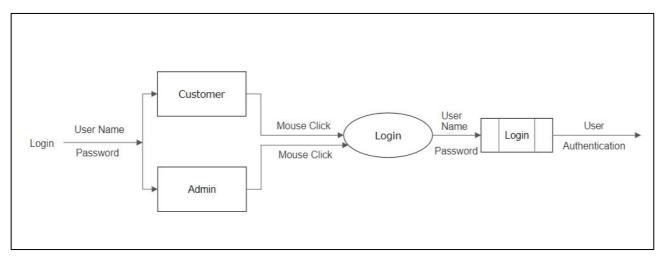


Figure - Level 2B DFD

### **\$** Level- 2C DFD:

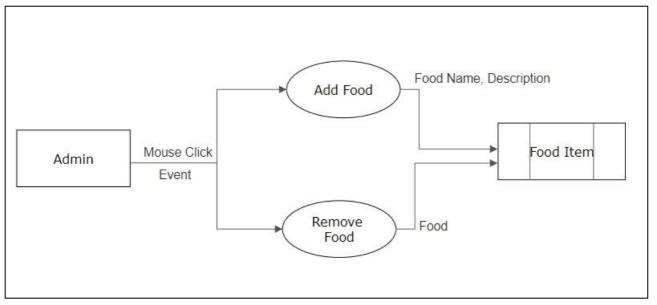


Figure - Level 2C DFD

### Level- 2D DFD:

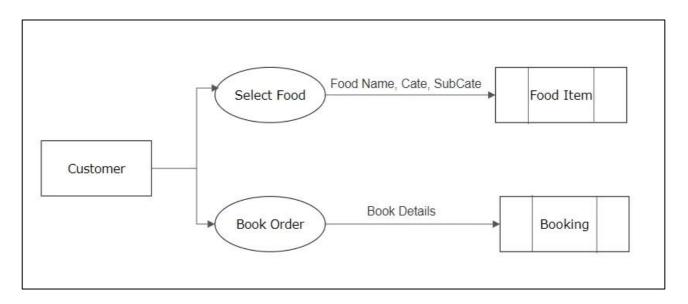


Figure - Level 2D DFD

# **CHAPTER 11: TABLE DESIGN**

# ❖ Sign Up:

Field Name	Description	Field Type	Range
ID	Customer ID	Int	100
Username	Name of the User	varchar	50
Contact	Contact no	Int	10
Gender	Gender	Varchar	50
Address	Address	Varchar	50
Email	Mail_ID	Varchar	50
Pass	Password	Varchar	20

# **&** Login:

Field Name	Description	Field Type	Range
ID	Customer ID	Int	100
Username	Name of the User	varchar	50
Pass	Password	Int	10

# **Customer:**

Field Name	Description	Field Type	Range
Customer ID (Pk)	Customer ID	Int	100
First Name	First Name	varchar	50
Last Name	Last Name	Varchar	50
Phone_No.	Phone Number	Int	10
Address	Address	Varchar	50
Mail_ID	Mail_ID	Varchar	50

# **❖** Booking:

Field Name	Description	Field Type	Range
Cname	Customer Name	Varchar	50
Address	Address	varchar	50
Contactno	Contact No	Int	10
Pname	Product Name	Varchar	50
Price	Price	Int	10
Qty	Quantity	Int	10
Tprice	Total Price	Int	10
Status	Order Status	Varchar	50
Payment method	Payment method	Varchar	50
Username	Username	Varchar	50
Date	Booking Date	Date	-

# **\*** Item:

Field Name	Description	Field Type	Range
Item_ID (PK)	Item ID	Int	100
Name	Item name	Varchar	50
Description	Item Description	Varchar	50
Price	Item Price	Int	10
Prep_Time	Item Preparation	Int	100
	Time		

### **❖** Order:

Field Name	Description	Field Type	Range
Order_ID (Pk)	Order ID	Int	100
Customer_id (Fk)	Customer id	Int	100
item_id (Fk)	Item id	Int	100
Quantity	Quantity	Int	100
Delivery	Delivery	Int	100
Payment	Payment	Int	100
Actual Time	Actual Time	Int	100

# **❖** Product:

Field Name	Description	Field Type	Range
Pid	Product Id	Int	100
Pname	Product Name	Varchar	50
Category	Product Category	Varchar	50
Subcategory	Product	Varchar	10
	Subcategory		
Pimg	Product Image	Varchar	100
Price	Product Price	Int	10
Unit	Product Unit	int	10

# **\*** Category Table:

Field Name	Description	Field Type	Range
Scid	Subcategory id	Int	100
Catname	Category Name	Varchar	50
Image	image	Varchar	50
Subcat	SubCategory	Varchar	10
Description	Description	Varchar	100

### **CHAPTER 12: SYSTEM DESIGN**

The process model used for this system "Classic Life Cycle" as this is simple and is best for small scale project The "Classic Life Cycle" is also called System Development Life Cycle (SDLC). It is defined "The growth of an information system is through various identifiable stages. These stages are grouped together and referred as SDLC." The structure of its stages which we used in our project is as follows:

### **Waterfall Model**

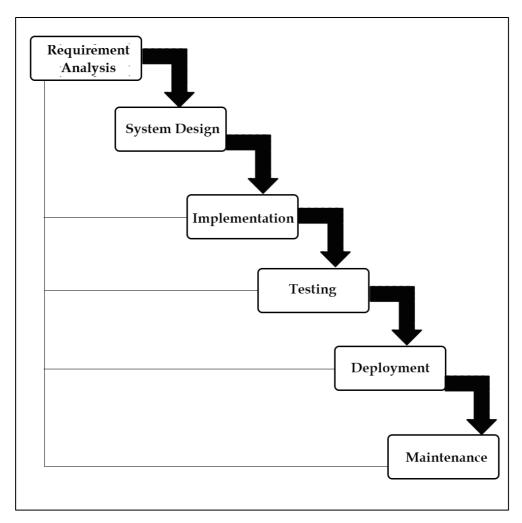


Figure - SDLC Model

# **CHAPTER 13: SCREEN SHOT**

### > Sign Up Page:

When new user does not have account then through this Page, he can register himself to the system. The user has to just do one thing that fill all details on registration form. also, every entry should be unique so that the problem of duplication is avoided and there no user with same details in the database.



Figure - User Signup

### **Login Page:**

The admin need fill in a valid username and password to log in to the Meals on wheels. Here a validation function will check whether the username and password provided by the admin are valid or invalid, if the username and password are valid, the admin will log in successfully and enter the Meals on Wheels Master page, and otherwise a warning message will show.



Figure - User Login Page

### > Master Page:

After the Admin has logged in successfully, he will be allowed to enter the Meals on Wheels Master page. On this Master page, there are seven main modules: Home, About, Chef, Menu, Admin Login, User Login. The Admin can also log out of the system by clicking "Logout "



Figure - Master Page

# > Add Category:

Add category tab consist of mainly 4 fields Category ID, Name of product, Image and Description of the product.

In this field the admin can add the main Meals along with their ID, image and description.



Figure - Add Category

### > Add Food Item:

In this section Admin can Food items by selecting ID, Food name, Category and Sub category. This food will be displayed in the Menu section.



Figure - Add Food Item

### > Add Sub Category:

In this Panel we will see the Added List of Category, Subcategory, image and Description of the food it is useful for User for which food they will order and what is the description of that food.

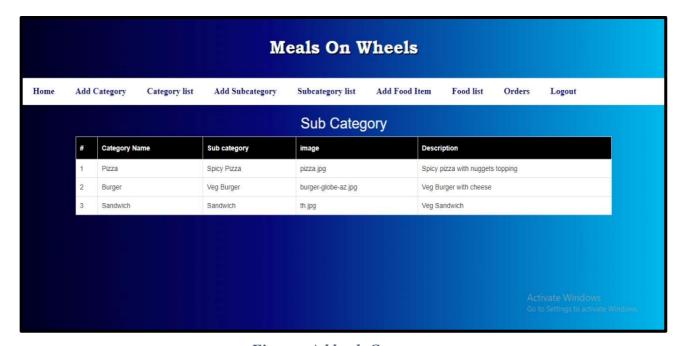


Figure - Add sub-Category

### > Category List:

In this section we can see all the Categories of food items along with their images and description. The categories which are added by the Admin.

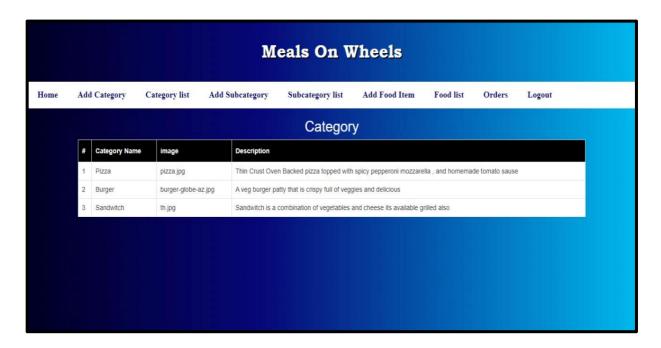


Figure - Category List

# > Orders List:

In Order List Users can maintain track in their orders with delivery reputation. Here User can see the Customer name, address contact no, food name, price, Unit, Status and Date and Time. Via that knows which food they will be order.



Figure - Orders List

### > Food List Screen:

In the Food List Section, we can see all the Food items and it contains various columns like: Food name which will show the Food item name, Category name will show the main Category of that Food item/to which Category it belongs to, Sub category displays the Sub Items under the main category, Image column shows the related images to the specific food item, Price column displays the price for food item and at last Unit shows the total units of the item.



Figure - Food List

# > Order Booking:

In this Panel Admin can book customers order via entering customer name, address, contact no, product name, product price, quantity and total price

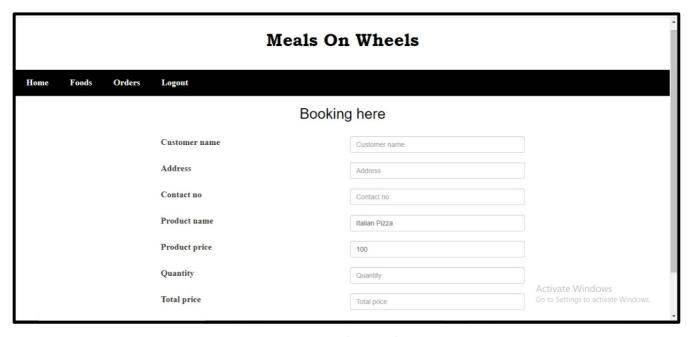


Figure - Order Booking

### Users Orders:

In the Users Orders section, we can get all the list of users and their orders.

It contains columns like: Customer name which shows the name of customer, Address of the customer, contact number of customers, Product which is ordered by the customer, Price of product per piece, total Units and Total price, Status shows the current status of order, Date and time at which the order is placed and Action tab can be used to cancel the order if it's been ordered by mistake or such cases.



Figure - Users Orders

# > Menus Gallery:

Menus Gallery displays all the pictures of Menus which are available.

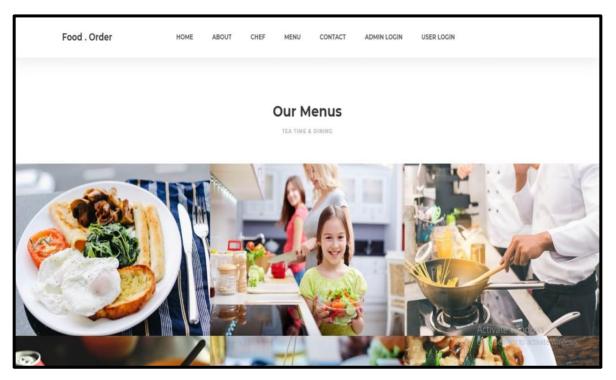


Figure - Menus Gallery

# > Chef Gallery:

The Chef gallery displays our Chefs who are working.

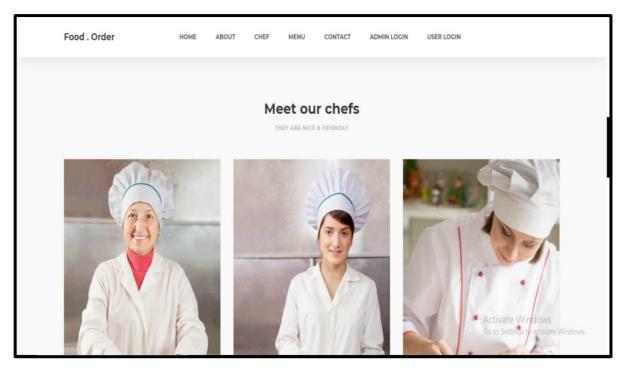


Figure - Chef Gallery

### Contach Us:-

For any enquiry or feedback the users can contact us by Contact page. by providing the Full name, mail address, subject and the problem/feedback the user can share with us.

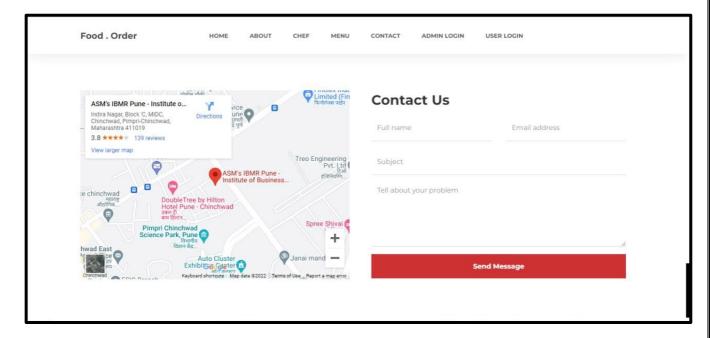


Figure - Contact Us

# **CHAPTER 14: VALIDATION AND CHECK**

Here we have done validation throughout the project like we have implemented the validation for loginand signup page. In login page there are username, gender, address, contact number email id, password Username: user name should not exceed 500 characters.

Contact number: Validated using JavaScript, contact number should be integer type and should not more than 10 characters

Email id: Email must contain @ along with Domain name and dot.

# **CHAPTER 15: IMPLEMENTATION AND MAINTAINENCE** adherence was made on proven software engineering principles and practices. To implement this design, a computer program was written and tested in JavaScript NetBeans environment. It is hoped that effective implementation of this software product would eliminate many problems discovered during systems investigation.

### **CHAPTER 16: FUTURE ENHANCEMENT**

- Customize orders: Allow customers to customize food orders.
- Enhance User Interface by adding more user interactive features.
- Provide Deals and promotional Offer details to home page.
- Provide Recipes of the Week/Day to Home Page
- Payment Options: Add different payment options such as PayPal, Cash, Gift Cards etc. Allow to save payment details for future use.
- Allow to process an order as a Guest
- Delivery Options: Add delivery option
- Order Process Estimate: Provide customer a visual graphical order status bar
- Order Status: Show only Active orders to Restaurant Employees.
- Order Ready notification: Send an Order Ready notification to the customer
- Restaurant Locator: Allow to find and choose a nearby restaurant

# **CHAPTER 17: BIBILOGRAPHY**

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### **\*** Websites:

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- www.slideshare.net
- www.wikipedia.com

